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Hesperiidae of Vietnam, 12.[1] A further contribution to the Hesperiidae fauna of North and Central Vietnam

by

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Summary: A number of species listed as "possible" for Vietnam in a previous publication (Devyatkin & Monastyrskii, 1999) is confirmed, along with new records; some taxonomic corrections to the previous list are given, in view of the new data. The rank of *Hasora taminatus malayana* (C. & R. Felder, 1860), *Abraximorpha davidii esta* Evans, 1949 and *Pithauria stramineipennis linus* Evans, 1937 is raised to species level. A new subspecies, *Capila lineata irregularis* subspec. nov. is described and illustrated. The status of *Capila lineata magna* Devyatkin & Monastyrskii, 1999 and *Celaenorrhinus asmara consertus* de Niceville, 1890 is discussed.

Introducti

Since the publication of the first list of the Hesperiidae of North and Central Vietnam (Devyatkin & Monastyrskii, 1999), a lot of species has been discovered in the area or detected amongst the previously unidentified material; also, a book concerning the immediately neighbouring territory of Laos was published (Osada et al., 1999), thus making a number of further species possible for Vietnam. The present list contains new records and confirms the occurrence of some species listed as "possible" in the previous paper, along with some taxonomic corrections in view of the new data. Some of the species recorded earlier are also mentioned, in case their distribution is significantly extended by the new records. The species recently described in separate publications (Devyatkin, 2000a, c, 2001) and those being described at present, are not regarded in this paper.

Collecting localities (for others mentioned in the text see Devyatkin & Monastyrskii, 1999)

North Vietnam

Hoang Lien Nature Reserve, Lao Cai Province (22°09-24'N, 103°47-59'E), 1300-3142 m a.s.l. The forest belongs to three types: sub-montane dry evergreen forest, tropical montane evergreen forest and sub-alpine forest. In addition, scrubland and savannah areas are found on ridge tops. The dwarf bamboo habitats are confined to the highest ridges of the Fansipan massif, at altitudes above 2800 m.
Collectors: FR (XI.-XII.1997), ALM, BXP, VVL (VI.-X.1998).

1 For (11) see Devyatkin, A. L. New taxa of the subfamily Hesperiinae (Lepidoptera, Hesperiidae). - Atalanta **33** (1/2): 127-135.

Huu Lien Nature Reserve, Lang Son Province (21°39-41'N, 106°20-25'E), 160-400 m a.s.l.
The natural vegetation consists of lowland secondary and fragmentary primary forest on limestone; the structure of the vegetation is similar to other limestone areas in N. Vietnam, such as Ba Be, Na Hang etc.
Collectors: FR (VII.-VIII.2000).

Cat Ba National Park, Cat Hai district, Hai Phong Province (20°44'-20°51'N, 106°38'-106°45'E); centred on Cat Island, 28,500 ha, which lays 30 km east of Hai Phong city. The landscape is dominated by limestone islands rising steeply from the sea; supports a grest diversity of habitats, including forested hills, small freshwater lakes, freshwater swamp forest, mangroves, sandy beaches and coral reefs. The main natural vegetation is limestone forest.
Collectors: FR (VII.-VIII.1999), ALM (V.-VI.2001).

Ben En National Park, Thanh Hoa and Nghe An Provinces (19°30-40'N, 105°21-35'E), 20-497m a.s.l.
The area partly belongs to the Northern Indochina subtropical forest and to the Northern Vietnam coastal moist forest. Lowland areas are mainly covered with secondary forest. There are small fractions of primary forest and forest on limestone; lowland forest is characterized by small, shade-intolerant trees and dense undergrowth dominated by bamboo.
Collectors: FR (X.-XII.1998).

Central Vietnam

Xuan Lien Proposed Nature Reserve, Thanh Hoa Province (19°52'-20°02'N, 104°58'-105°15'E), 100-1065 m a.s.l.
The area is characterized by low mountains dissected by deep, narrow valleys. The main forest types are: medium to high montane mixed coniferous and broad-leaved evrgreen forest; low montane broad-leaved evergreen forest; secondary and bamboo forests.
Collectors: ALM (X.-XI.1998).

Huong Son Nature Reserve, Ha Tinh Province (18°30' 15'N; 105°15' 33'E); 140-300 m a.s.l.
Lowland secondary forest with rare fragments of primary forest.
Collectors: FR (X.-XII.2000, II.-VI.2001), ALM (IV.2001)

Pu Hoat Proposed Nature Reserve, Que Phong district, Nghe An Province (19°38'-20°00'N, 104°40'-105°09'E); 56,232 ha of natural forest belonging to three main types: lowland evergreen forest, lower- and upper mountain evergreen forest.
Collectors: FR (I.-II., V., X.-XII.1999).

Ke Bang Proposed National Park, Quang Binh Province (17°22-47'N, 105°46-106°16'E, 106,813 ha).
Steeply rising but well vegetated karstic limestone hills with small in-lying "sink" valleys (the terrain ca. 400-1000 m a.s.l); primary and secondary semi-deciduous forest on slopes and ridges, secondary and ruderal vegetation in larger valleys.
Collectors: A. L. Devyatkin, VVL (III.-IV.1999).

Dak Rong Proposed Nature Reserve (localities: Khe Ba Long, Ta Ruc), Quang Tri Province (16°23-39'N, 107°10-57'E), 100-1408 m a.s.l.
Located in the southern part of the Annamese Lowlands and encloses one of the largest remaining parts of evergreen and semi-evergreen lowland forests (below 1000 m). The forest area has been significantly reduced by human exploitation and defoliation during the war. The main types of the forest are as follows: primary and mature secondary forest; immature secondary forest; regenerating forest; patch forest (individual trees growing in grasslands).
Collectors: ALM, TRAN HIEU MINH (VI.-VII.1998).

Phong Dien Proposed Nature Reserve (locality: Khe Lau), Thua Thien Hue Province (16°21-34'N, 107°01-17'E), 100-800 m a.s.l.
Same characteristics as Dak Rong.
Collectors: ALM, TRAN HIEU MINH (VI.-VII.1998).

Ngoc Linh Nature Reserve, Kon Tum Province (14°45'-15°15'N, 107°21'-108°20'E), 900-2598 m a.s.l.
A montane area with the highest peak of 2598 m (Mt. Ngoc Linh). According to the forest type classification by THAI VAN TRUNG (1978), the following types were found in the nature reserve: high montane broad-leaved evergreen forest; medium to high montane broad-leaved evergreen forest; low montane broad-leaved evergreen forest and secondary forest.
Collectors: ALM, HA VAN HOACH (III.-V.1998).

Kon Plong Forest Complex, Kon Tum Province (14°37-55'N, 108°10-30'E).
Belongs to the Central Annamite Highland massif. The forest types and structure are rather similar to those in Ngoc Linh, the natural vegetation consisting of broad-leaved evergreen forest mixed with conifers and secondary vegetation. More than 75% of the forest area has already degraded due to human activities.
Collectors: ALM, BXP (XII.2000-I.2001).

Kon Ka Kinh and Kon Cha Rang Nature Reserves, Gia Lai Province (14°09-30'N, 108°16-37'E), 600-1700 m a.s.l.
Moderate to high montane broad-leaved evergreen forest; high montane coniferous forest where *Fokienia hodginsi* is the dominating species; riverine forest. The highest peak is about 1742 m (Mt. Kon Ka Kinh). Collectors: ALM (II.-IV.1999).

Yok Don Nature Reserve, Dac Lac Province (12°45'-13°00'N, 107°29-50'E).
The area belongs to the Central Annamite Range. The vegetation is represented mainly by deciduous forest, with smaller areas of semi-deciduous and evergreen forest, dominated by Dipterocarpaceae family (however the families Anacardiaceae, Combretaceae, Fabaceae and Myrtaceae also being well represented).
Collectors: Do NGOC ANH (VI.-VII.1998).

Principal collectors (in alphabetic order)
ALM - A. L. MONASTYRSKII
BXP - BUI XUAN PHUONG

FFI – Fauna and Flora International organization expedition
FR – FRONTIER organization volunteers
VVL – Vu Van Lien

Bibasis jaina jaina (Moore, [1866])
Ba Be-Na Hang area, 28.IV.2001, 1 ♂ (BXP).
First record of the nominate subspecies (distributed from N.W. Himalayas to N. Thailand and N. Laos) from Vietnam, ssp. *margana* Fruhstorfer, 1911 being known from C. Vietnam.

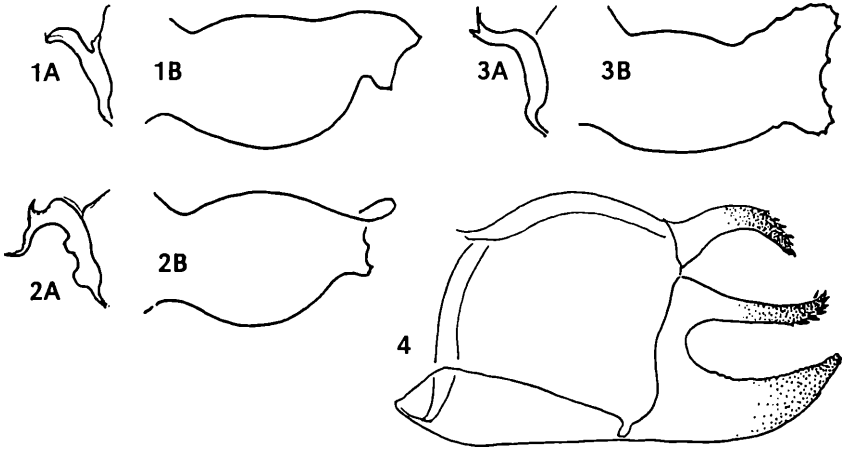
Bibasis sena sena (Moore, [1866])
Dak Rong, 30.VI.1998, 2 ♂♂ (ALM); Pu Mat, 550 m, 22.VIII.1998, 1 ♀ (FFI).
This species (ssp. *uniformis* Elw. & Edw.) was recorded only from the south of Vietnam; the specimens from the central areas are however close to the nominate subspecies.

Hasora malayana (C. & R. Felder, 1860)
Widely distributed in North and Central Vietnam (Cuc Phuong, Huong Son, Pu Mat, Ke Bang, Khe Lau, Ngoc Linh, Kon Ka Kinh), as well as in the south of the country.
The presumed species rank of this taxon (Devyatkin & Monastyrskii, 1999) was directly confirmed by its sympatric and synchronic occurrence with *H. taminatus bhavara* Fruhstorfer, 1911 in the Ke Bang area and Kon Ka Kinh (so far the southernmost locality in the distribution of *bhavara*) in March–April 1999. The male genitalia of *malayana* display marked differences from *bhavara*, while those of the latter are somewhat different from the genitalia of the nominate *H. taminatus* (Hübner, [1818] (figs. 1–3). Both *malayana* and *bhavara* are at present found in a number of localities in Vietnam, and their distributions widely overlap, that of *H. malayana* extending as far north as to Hong Kong (Bascombe et al., 1999). Most probably, all the three taxa in question are likely to represent separate species; a revision of the whole *taminatus*-complex is required, involving all the known subspecies.

Hasora proxissima siamica Evans, 1932
Yok Don, VI.1998, 1 ♂ (Do Ngoc Anh).
The northern distribution limit of the species is so far known as C. Laos (Thathek) (Osada et al., 1999), the differences between the ssp. *siamica* and the ssp. *chalybeia* Inoue & Kawazoe, 1964, described from S. Vietnam, being not well expressed, in our opinion.

Capila lidderdali (Elwes, 1888)
Ngoc Linh, 1100 m, 10.IV.1998, 2 ♂♂ (ALM).
First record from Vietnam; this is the southernmost locality in the distribution of this rare species, known from Nepal, Sikkim and Assam and recently discovered in C. Laos (Osada et al., 1999). The scarcity of the overall material does not allow adequate subspecific treatment of the species.

Capila pauripunetata Chou & Gu, 1994
Ngoc Linh, 1600 m, 1.IV.1998, 1 ♂ (ALM); 1100 m, 10.IV.1998, 2 ♂♂ (ALM).



Figs. 1-3: *Hasora* MOORE, male genitalia (A - end of harpe, caudal view; B - distal part of right clasp, inner view). Fig. 1 - *H. taminatus bhavara* FRUHSTORFER, 1911 (Ke Bang); fig. 2 - *H. malayana* (C. & R. FELDER, 1860) (Ke Bang); fig. 3 - *H. taminatus taminatus* (HÜBNER, [1818]) (S. India, Karwar).
Fig. 4: *Capila lineata irregularis* subspec. nov., holotype ♂ (right clasp, inner view).

First record from C. Vietnam; these three specimens, taken together with *C. lidderdali*, do not seem to be very different from those from the north, described as ssp. *tamdaoensis* DEVYATKIN, 1996.

Capila zennara (MOORE, [1866])
Ngoc Linh, 9.V.1998, 1 ♂ (HA VAN HOACH).
First record from Vietnam and the southernmost locality in the distribution; otherwise only known from Sikkim, Assam and Bhutan (EVANS, 1949).

Capila translucida LEECH, 1893
Tam Dao, 13.V.1995, 1 ♀ (ALM); Cuc Phuong, 3.V.1998, 1 ♂ (LE TRONG DAT).
First record from Vietnam; otherwise known only from W. China. A closely related taxon, *C. nigrilima* CHOU & GU, 1994 was described from Hainan, possibly representing a southern subspecies of *C. translucida*. Our male specimen seems rather intermediate between these two taxa in the respect of the development of hindwing hyaline spots. In view of this, the discovery of this species in mountainous areas of C. Vietnam would not be unexpected.

Capila lineata ***irregularis*** **subspec. nov.**
(colour plate Va, figs. 1, 2)

Holotype ♂: Central Vietnam, Nghe An Province, Pu Hoat Nature Reserve, 17.V.1999, FRONTIER leg.

Paratype: 1 ♂, Central Vietnam, Ha Tinh Province, Huong Son Forest Complex, 800 m, 5.VI. 2001, FRONTIER leg.

Description
Upperside (col. pl. Va, fig. 1). Forewing: ground colour brown; a discal band from mid-costa to tornus, its outer border being less regular than the inner one; a series of 5 subapical spots in spaces 4 to 8, those in spaces 4–5 being smaller than the rest; all markings hyaline white. Hindwing: ground colour paler brown compared to forewing, due to faint yellowish tinge on disc; a series of dark elongate spots in spaces 1c to 7. Underside (col. pl. Va, fig. 2). Forewing: ground colour brown, paler in space 1; the same white markngs as on the upperside. Hindwing: ground colour slightly paler and more uniform than on the upperside, with the same dark markings; space 1b whitish.
Length of forewing 27.5–28.0 mm.

Male genitalia (fig. 4)
In general, very similar to those of the nominate *C. lineata* figured in Chou (1994). Uncus broad, its dorsal surface convex, with two short widely separated ventro-lateral processes, which are rounded and minutely spined at tips. Clasp with 3 curved unequal processes, increasing in size from the dorsal to the ventral one; the costal and the median processes are spined and pointed at ends, the ventral one is unspined and covered with hairs throughout. Aedeagus about 1.3 times longer than clasp, with its distal end slightly expanded and curved upwards, with numerous small spines on vesica.

Diagnosis
Differs from the nominate subspecies in having 5 subapical spots instead of 4; white band interrupted by vein 2, with less regular outer border.

Discussion
Capila lineata Chou & Gu, 1994 was described after a single male specimen from Hainan, in comparison with *C. penicillaltum* (de Niceville, [1893]). Later, a new subspecies, *C. lineata magna* Devyatkin & Monastyrskii, 1999, was described from Central Vietnam (Bach Ma), the two specimens (a male and a female) being rather different from the nominate *C. lineata*, but still much closer to it than to *C. penicillatum*.
With the discovery of the new subspecies of *C. lineata*, the question arises about the taxonomic status of *C. lineata magna*, due to differences in the appearance and the male genitalia. The new subspecies, also from Central Vietnam, is more similar to the nominate *C. lineata* in external features and genitalia, viz., in the relative length of the distal processes of the clasp, the male genitalia being in general very similar in this group. While in *C. penicillatum* the length of the three distal processes decreases from the dorsal to the ventral side of the clasp, in *C. lineata* the direction is quite opposite; in the taxon *magna*, the median process is the longest, the dorsal one being the shortest (Devyatkin & Monastyrskii, 1999). In external features, *magna* differs from *C. lineata* in the reduction of the forewing subapical spots and in the discal band being straighter and narrower.
Due to all these relative differences, the rank of ssp. *magna* may be suggested to be raised to species level. Although no direct sympatry with *C. lineata* has so far been proved, this action might be justified in view of the high endemism of the Pyrginae taxa in the area of North and Central Vietnam, demonstrated by the description of new species in the genera *Celaenorrhinus* Hbn., *Darpa* Moore, *Pintara* Evans, *Tagiades* Hbn. etc. (Devyatkin, 1998a, b, 2000c,

2001). However, the overall material of the 3 taxa in question is at present too scarce (a total of 5 specimens) to make an adequate idea about the limits of variation and real subspecific composition of this group.

Celaenorrhinus aspersa LEECH, 1891
Ngoc Linh, 1100 m, 10.IV.1998, 1 ♂ (ALM).
First record from C. Vietnam, this being the southernmost locality in the distribution of the species; previously recorded from Tam Dao in N. Vietnam (DEVYATKIN & MONASTYRSKII, 1999).

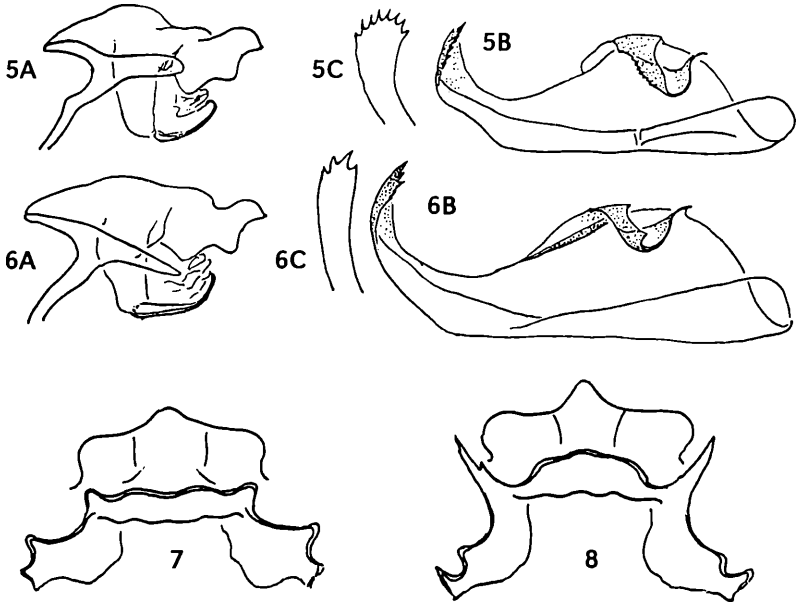
Celaenorrhinus oscula EVANS, 1949
Hoang Lien NR, 1400 m, 2.VI.1998, 1 ♂ (ALM).
First record from Vietnam; otherwise only known from W. China (Ta Tsien Lou area) (EVANS, 1949). The taxonomy and distribution of the *C. maculosa-oscula* group were discussed earlier (DEVYATKIN, 2000c).

Celaenorrhinus patula DE NICEVILLE, 1889
Cuc Phuong, 24.III.1998, 1 ♀ (VVL); 2.IV.1998, 2 ♂♂ (LE TRONG DAT); Huu Lien, 1.VIII.2000, 2 ♂♂ (FR); Ba Be-Na Hang area (loc. Trung Son), 18.V.2001, 1 ♂ (BXP).
First record from Vietnam; distributed from W. China, Nepal and N.E. India to Burma, N. Thailand and S. Laos.

Celaenorrhinus inaequalis irene EVANS, 1941
Xuan Lien, 29.X.1998, 1 ♂ (ALM)
First record from Vietnam; the general distribution of the species is from S. Laos and S. Thailand to Sumatra, Borneo and Java.

Celaenorrhinus asmara asmara (BUTLER, [1879])
Khe Ba Long, 24.VI.1998, 1 ♂; 26.VI.1998, 1 ♀ (both ALM); Kon Ka Kinh, 5.IV.1999, 1 ♀ (ALM).
First record from C. Vietnam; so far was found only in the south (see below).

Celaenorrhinus asmara consertus DE NICEVILLE, 1890
Ba Be-Na Hang Area (Lung Li Valley), 2.V.2001, 1 ♀ (BXP); Cuc Phuong, 23.V.1998, 1 ♀ (M. HILL); Cat Ba, 19.V.2001, 1 ♂ (ALM); Pu Mat, 31.VI., 23.IX.1998, 2 ♀♀ (both FFI, QUANG); Huong Son, 22.IV.2001, 1 ♀ (BXP).
This subspecies was listed for C. Vietnam in the previous publication (DEVYATKIN & MONASTYRSKII, 1999).
The newly collected material suggests a strong suspicion that the two subspecies should be regarded as separate species, although no direct sympatry has so far been observed.
The principal external characters distinguishing *C. a. consertus* from the nominate subspecies are as follows: in *C. a. consertus* the wings are less produced, and the double pale area in space 1b on the forewing underside is well-marked (this spot being diffuse and hardly traceable in *C. a. asmara*); in *C. a. asmara*, the conjoined discal spots are slightly more solid and rounded.
The male genitalia (figs. 5, 6) are relatively smaller in *C. a. consertus*, and the upwardly bent end of the cuiller is shorter and more serrate; the lateral processes of the tegumen are shorter and rounded at ends; the costal lobe at the base of the clasp is longer and spined ; the juxta is



Figs. 5, 6: *Celaenorrhinus* HÜBNER, male genitalia (A – tegumen, uncus and gnathos, lateral view; B – right clasp, inner view; C – end of clasp, caudal view). Fig. 5 *C. asmara consertus* DE NICEVILLE, 1890 (Vu Quang); fig. 6 – *C. asmara asmara* (BUTLER, [1879]) (S. Vietnam, Cat Tien). Figs. 7, 8: *Celaenorrhinus* HÜBNER, female genitalia (shape of genital plates). Fig. 7 – *C. asmara consertus* DE NICEVILLE, 1890 (Huong Son); fig. 8 – *C. asmara asmara* (BUTLER, [1879]) (Dak Rong).

of a rather different shape. In the female genitalia (figs. 7, 8), the postvaginal plate seems to be a little wider in *C. a. asmara*, and the antevaginal plate bears a pair of rather long lateral processes.

The differences in the appearance and genitalia are marked and do not tend to displaly transitions, although the known distribution areas of *asmara* and *consertus* in Vietnam are separated by a relatively narrow zone which seems to contain no crucial isolating factors.

This case seems to be rather similar to that of *Hasora taminatus bhavara* FRUHST. and *H. malayana* FELD., and until direct sympatry of both taxa is proved, we are traditionally listing them as subspecies.

The nominate subspecies (type locality: Malacca) has also been found in S. Vietnam (Cat Tien, Lo Go Xa Mat), as well as in Peninsular Thailand (KIMURA, 1996). The record of *C. a. consertus* from S. Vietnam (Trang Bom) by INOUE & KAWAZOE (1964a) should also be referred to ssp. *asmara*, judging from the photograph and the figure of the genitalia.

Celaenorrhinus aurivittata (MOORE, 1879)

Pu Mat, 5.V.1998, 1 ♂ (FFI).

This seems to be the first documented record from Vietnam. Within the Indo-Chinese area, this

species is known with certainty only from Thailand; other records, like that in Osada et al. (1999) from Laos, may at least partly refer to the sympatric *C. vietnamicus* Devyatkin, 1998. The differences between the two species were discussed earlier (Devyatkin, 1998a).

Darpa hanria Moore, [1866]
Vu Quang, 1500 m, 7.IV.2000, 1 ♂ (ALM); Ngoc Linh, 1600 m, 20.II.1998, 1 ♂ (ALM).
First record from Vietnam; distributed from Nepal, Sikkim and Assam to N. Laos and N. Thailand.

Seseria sambara indosinica (Fruhstorfer, 1909)
Huu Lien, 28.VII., 1.VIII.2000, 2 ♂♂ (FR); Cuc Phuong, 4.VI.1998, 1 ♂ (Le Trong Dat); Pu Mat, 1.VII.1998, 1 ♂ (FFI).
Apart from the obscure data of Evans (1949) ("Tonkin") and Metaye (1957) ("Nord"), these are the first documented records of the species from Vietnam; (two females from Ke Bang may also belong to this taxon, but cannot be at present identified with certainty). A specimen from Laos is however referred to the nominate subspecies by Osada et al., (1999).

Seseria dohertyi salex Evans, 1949 (col. pl. Va, figs. 3, 4)
Bach Ma, 500 m, 13.VII.1996, 1 ♂ (ALM).
According to Evans' original description and figures, ssp. *salex* (described from Hainan), to which our specimen is most similar, is clearly separable from *S. dohertyi dohertyi* (Watson, 1893) by external features and genitalia, and may prove to be a separate species. On the other hand, *S. dohertyi scona* Evans, 1949, described from Yunnan, seems to bear some intermediate characters, being in general more related to *salex* (only the type is known). Due to scarcity of the material on all the taxa, the taxonomy of the *dohertyi*-complex still remains unclear. The specimen from C. Laos (Lak Sao) illustrated by Osada et al. (1999) as *S. dohertyi* ssp. looks very much like *salex*. The nominate *dohertyi* is distributed in N.W. Himalayas, Nepal, Sikkim and Assam (Evans, 1949).

Pintara tabrica (Hewitson, [1873])
Cuc Phuong, 23.IV.1998, 2 ♂♂ (Dat & Duc); 5.V.1998, 1 ♂ (Le Trong Dat); 9.V.1998, 1 ♀ (ALM).
The possible occurrence of this species in N. Vietnam was discussed earlier (Devyatkin & Monastyrskii, 1999), in view of the old record from "Laokai" (although referred to Cochin-China = S. Vietnam!) (Evans, 1949).

Pintara pinwilli pinwilli (Butler, [1879])
Ke Bang, 26.III., 18.IV.1999, 2 ♀♀ (ALD).
This southern species has been previously known only from the south of the country (Inoue & Kawazoe, 1964b); the known distribution extends as far north as to Karens in Burma (Evans, 1949).

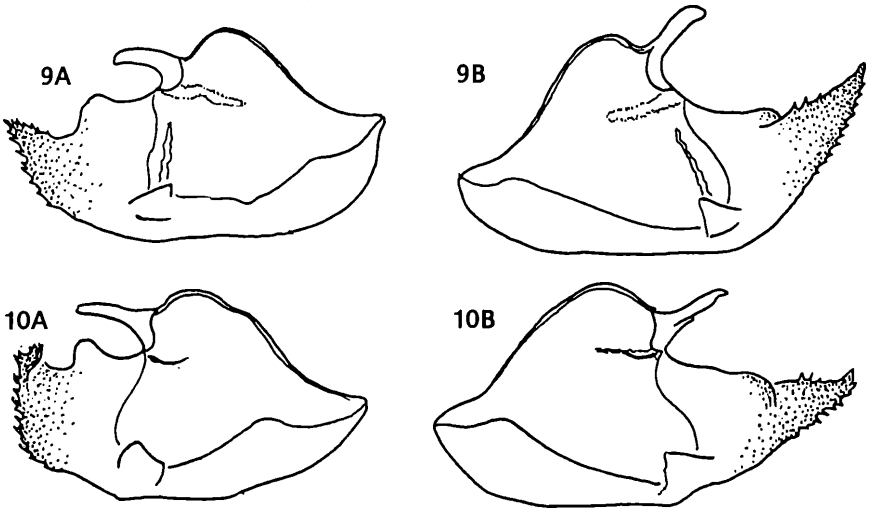
Gerosis sinica narada (Moore, 1884)
Cuc Phuong, 30.III.1998, 1 ♂ (Mike J. Hill); Hoang Lien (loc. Den Thong), 9.XI.2000, 1 ♀ (VVL).
First record from Vietnam, this subspecies being distributed from N.E. India to Burma and S. Laos (Osada et al., 1999).

Abraximorpha davidii elfina (Evans, 1949) (col. pl. Va, fig. 5)
Vu Quang, 27.VIII.1997, 1 ♂ (BXP); Ke Bang, 25., 26., 31.III., 5., 6.IV.1999, 5 ♂♂, 3 ♀♀ (A. L. Devyatkin, VVL); Huong Son, IV–V.2001, 2 ♂♂, 3 ♀♀ (ALM).
Upon the accumulation of the material, most of the Vietnamese specimens seem to be most closely related to ssp. *elfina* Evans, 1949, as it was suggested by Inoue & Kawazoe (1964b) for S. Vietnam. The type locality of this taxon still remains unknown, since it was mentioned as "Java" (ex coll. Boisduval) in the original description. The previous record of *A. davidii* (Mabille, 1876) (Devyatkin & Monastyrskii, 1999) should also be referred to this subspecies. Some of the northern specimens, however, show a transition to the nominate subspecies. See also notes on *A. esta* Evans.

Abraximorpha esta Evans, 1949 (col. pl. Va, fig. 6)
Hoang Lien NR, 1400 m, 2.VI.1998, 2 ♂♂ (ALM).
Examination of the type specimen and other material on this taxon in the BMNH collection has shown that it can be definitely regarded as a separate species, although differences in the male genitalia from *A. davidii* Mab. are not extremely sharp (figs. 9, 10). The latter is widely distributed in S. China from Szechwan to Taiwan and further south to S. Vietnam, while *A. esta* seems to be confined to the northern Indo-China, from Yunnan to N. Burma; both were recently found in Laos (Osada et al., 1999). The general distribution areas of both species thus seem overlapping, although no direct sympatry has so far been observed.

Aeromachus jhora (de Niceville, 1885)
Hoang Lien, 2.XI.1997, 1 ♀ (FR), 24.VIII.1998, 1 ♂ (VVL); Ngoc Linh, 1100 m, 15.IV.1998, 1 ♀ (Ha Van Hoach); Kon Plong, 11.–13.I.2001. 3 ♂♂ (ALM, BXP).
A single specimen of the *jhora*-group was listed as *A. cognatus* Inoue & Kawazoe, 1966 in our previous paper (Devyatkin & Monastyrskii, 1999). However, upon examination of types and other material on *A. jhora* in the BMNH collection, we have come to the conclusion that all Vietnamese specimens belong to this species. Actually, we cannot find any reliable differences between the genitalia of *A. jhora, A. pseudojhora* Lee, 1962 and *A. cognatus*: the shape of uncus, which is considered to be the main diagnostic character, is in fact very similar in all the three species, being highly variable in *A. jhora* and, moreover, dependent on the angle of vision.
A. cognatus was described in comparison with *A. dubius* Elwes & Edwards, 1897 and not with *A. jhora*, of which the authors apparently had no material. In *A. pseudojhora*, the clasp of the single male (holotype) looks strongly elongate, but the shape of uncus is the same as in *A. jhora*. However, the question about the synonymy of these species remains open until the types of *A. pseudojhora* and *A. cognatus* are examined.
The external features of *A. jhora* are also very variable and do not provide good subspecific characters; according to Evans (1949), the area from Assam to Malaya falls within the range of ssp. *creta* Evans, 1949.

Pedesta serena (Evans, 1937)
Kon Plong, 12.I.2001, 1 ♂ (BXP); Ngoc Linh, 1100 m, 23.IV.1998, 1 ♂ (Ha Van Hoach).
First record from C. Vietnam and the southernmost locality for this species; further distribution in W.Szechwan, Yunnan and N. Burma.



Figs. 9, 10: *Abraximorpha* Elwes & Edwards, male genitalia (A – left clasp, inner view; B – right clasp, inner view). Fig. 9 – *A. davidii elfina* Evans, 1949 (Vu Quang); fig. 10 – *A. esta* Evans, 1949 (Hoang Lien).

Thoressa hyrie (de Niceville, 1891)
Hoang Lien, 5.VII.1999, 1 ♂ (BXP); Vu Quang, 200–1500 m, 30.III.–7.IV.2000, 16 ♂♂; (ALM, BXP).
First record from Vietnam; otherwise distributed from S.E. Thibet (the type locality of *merea* Evans, 1932) to N. Thailand and C. Laos (Kimura, 1997; Osada et al., 1999).

Thoressa gupta (de Niceville, 1886)
Ngoc Linh, 1100 m, 16.IV.1998, 1 ♂ (Ha Van Hoach).
First record from Vietnam; known from N.E. India (Sikkim) and S. China (Yunnan).

Thoressa fusca (Elwes, [1893])
Hoang Lien, 1600 m, 4.VI.1998, 1 ♂ (ALM); Ngoc Linh, 1600 m, 22.III.1998, 1 ♂ (ALM).
First record from Vietnam; described from Burma, distributed from W. and S.E. China and N.E. India to N. Laos (Osada et al., 1999). The specimen from Hoang Lien is close to ssp. *strona* Evans, 1949.

Halpe homolea handa Evans, 1949
Kon Plong, 14.I.2001, 1 ♂ (ALM).
Apart from the type locality (N. Burma), this taxon has been found in Thailand (Kimura, 1997) and Laos (Osada et al., 1999); in the last case, it is treated as a separate species. A revision of the *H. homolea* Hew.-complex is vital, however at present the material is too scarce to reveal

the relation of the taxon *handa* to the North Vietnamese specimens, which are most close to ssp. *aucma* SWINHOE, 1893 (DEVYATKIN & MONASTYRSKII, 1999).

Halpe arcuata EVANS, 1937
Ba Be, 28.III.1997, 1 ♀; 3.IV.1997, 1 ♂; 1, 5.VI.1997, 2 ♂♂; 8.XI.1997, 1 ♀; 11.I.1998, 1 ♀ (all ALM).
First record from Vietnam; distributed from N.E. India through Indo-China to the Malay Peninsula.

Halpe pelethronix pagaia EVANS, 1932
Kon Ka Kinh, 1200 m, 24.III.1999, 1 ♂ (ALM).
First record from Vietnam; distributed from Burma to Sundaland.

Pithauria linus EVANS, 1937 (col. pl. Va, fig. 7)
Ba Be-Na Hang area (Lung Vi), 19.IV., 1.V.2001, 2 ♂♂ (BXP); Ben En (Thanh Hoa Prov.), 27.VII. 1997, 1 ♂ (FR); Pu Mat, 23.V., 6.IX, 15.IX.1998, 3 ♂♂ (FFI).
First record from Vietnam. The species rank of this taxon, described from W. Szechwan (O Mei Shan) and formerly treated as a subspecies of *P. stramineipennis* WOOD-MASON & DE NICEVILLE, [1887] distributed in W. and S.E. China, was directly confirmed by the sympatric occurrence of both formal subspecies in Ba Be and Pu Mat. Externally, these taxa slightly differ in wing shape and details of the underside pattern (col. pl. Va, figs. 7, 8); the male genitalia of *P. stramineipennis* and *P. linus* show marked differences (figs. 11, 12), as noted by EVANS (1949).

Scobura phiditia (HEWITSON, [1866])
Xuan Lien, 31.X.1998, 1 ♂; 4.XI.1998, 1 ♀ (both ALM); Huong Son, 21.IV.2001, 2 ♂♂ (ALM).
This species, distributed from Assam to Borneo, was previously known from Vietnam only after an old record by EVANS (1949) ("1 ♀, Tonkin").

Suada swerga suava EVANS, 1949
Ben En (Thanh Hoa Prov.), 8.XI.1998, 1 ♂ (FR); Kon Ka Kinh, Krong Pa River, 400 m, 8.IV.1999, 1 ♂; 600 m, 17.IV.1999, 1 ♀ (both ALM).
The previous records of this species by DEVYATKIN & MONASTYRSKII (1999) should be referred to *S. albolineata* DEVYATKIN, 2000. Although *S. swerga* was reported from S. Vietnam (INOUE & KAWAZOE, 1967), now it is found for the first time in the northern part of the country. At the same time, *S. albolineata* is found in the south (Lam Dong Prov.) where it flies together with *S. swerga suava*; thus, the distributions of both species seem to overlap throughout the country.

Suastus gremius gremius (FABRICIUS, 1798)
Cuc Phuong, 20.VII., 8.IX.1998, 2 ♀♀ (TCQ); 14.IX.1998, 1 ♂ (M. J. HILL), 1 ♂ (LE TRONG DAT).
The occurrence of this species in North and Central Vietnam was considered possible in the previous paper (DEVYATKIN & MONASTYRSKII, 1999).

Zographetus ogygia (HEWITSON, [1866])
Cuc Phuong, 28.VII.1998, 1 ♂ (VVL); 23.IV.1998, 1 ♂ (DAT & DUC); Khe Lau, 17, 20.VI.1998, 2 ♀♀ (ALM, T. H. MINH); Ke Bang, 17., 20., 26.IV.1999, 3 ♂♂ (ALD).

First record from Vietnam; distributed from Sikkim to Sundaland. Our specimens are variable and show intermediate characters in colour and male genitalia between *Z. ogygia* and *Z. doxus* ELIOT, 1959; judging from the detailed description of the latter species by ELIOT (1959, 1967), they should be rather identified as *Z. ogygia*. However, comparison with the type and reference material from the BMNH collection also reveals their similarity to *Z. doxus*, especially with respect to subunci and lamina inferior in the male genitalia, the differences in external characters and male genitalia between these two species being in fact not so sharp as stated by ELIOT (CORBET & PENDLEBURY, 1992). The relationship between these taxa is still to be clarified, and at present it seems to me more correct to refer the Vietnamese specimens to *Z. ogygia*.

Isma umbrosa (ELWES & EDWARDS, 1897)
Khe Lau, 19., 21.VI.1998, 2 ♀♀ (ALM, T. H. MINH); Khe Ba Long, 24.VI. (1 ♂), 27.VI.1998 (1 ♀) (ALM, T. H. MINH); Huong Son, 21.IV.2001, 1 ♂ (ALM).
First record from C. Vietnam, the species being previously known from the south (ssp. *contracta* INOUE & KAWAZOE, 1967). The nominate subspecies occurs as far north as to S. Thailand. OSADA et al. (1999) reported the species from C. Laos as ssp. *minuscla* INOUE & KAWAZOE, 1967 (the latter was originally described from S. Vietnam as a subspecies of *I. dawna* (EVANS, 1926)), thus making *contracta* (described a page after *minuscla*) a synonym. This action may prove to be quite reasonable, since the two taxa in question are very similar, both being close to *I. umbrosa*, and this species seems to be very variable in the Indo-Chinese region with the respect to the spotting pattern and male genitalia.

Isma bononia idyalis DE NICEVILLE, 1897
Ba Be, 5.VI.1997, 1 ♂ (ALM); Huu Lien, 29.VII.2000, 1 ♂ (FR); Cuc Phuong, 23.IV.1998, 1 ♂ (DAT & DUC); 23.VII.1998, 1 ♂ (TCQ); Ke Bang, 21., 31.III.1999, 2 ♂♂ (VVL); Kon Cha Rang, 5., 14.III.1999, 2 ♂♂ (ALM).
First record from Vietnam, the species being distributed from Burma to the Philippines.

Salanoemia noemi (DE NICEVILLE, 1885)
Khe Lau, 20.VI.1998, 1 ♀ (TRAN HIEU MINH).
First record from Vietnam; otherwise only known from N.E. India (Sikkim, Assam).

Salanoemia tavoyana (EVANS, 1926)
Pu Mat, 31.VI.1998, 1 ♂ (FFI).
First record from Vietnam; distributed from Burma to Borneo (EVANS, 1949). However, ELIOT (in CORBET & PENDLEBURY, 1992) considers the distribution of this species as being restricted only to S. Burma and Kedawi, referring the Malayan and Bornean populations to *S. similis* (ELWES & EDWARDS, 1897). At the same time, *S. tavoyana* was recently recorded from Johor (MARUYAMA, 2000).

Unkana ambasa attina (HEWITSON, [1866])
Xuan Lien, 30.X.1998, 1 ♀ (ALM); Khe Ba Long, 24.VI., 1 ♀; 25.VI.1998, 1 ♂ (ALM); Huong Son, 2.XI.2000, 1 ♀ (FR); 21.IV.2001, 1 ♀ (ALM).
First record from C. Vietnam. The Malayan ssp. *batara* DISTANT, 1886 was listed for S. Vietnam by INOUE & KAWAZOE (1970); in our opinion, all Vietnamese specimens are closer to ssp. *attina* HEW.

Gangara lebadea lebadea (Hewitson, [1868])
Dak Rong (loc. Khe Ba Long), 25.VI.1998, 1 ♀ (ALM).
This seems to be the first specimen collected in Vietnam since the record by Metaye (1957) from N. Vietnam; distributed from Ceylon and Andamans through N.E. India and Indo-China to Borneo.

Oriens goloides (Moore, [1881])
Ba Be-Na Hang area (loc. Lung Vi), 19., 22.IV.2001, 2 ♂♂ (BXP).
First record from Vietnam; otherwise distributed from Ceylon, India, Nepal and S. China to the Malay Peninsula.

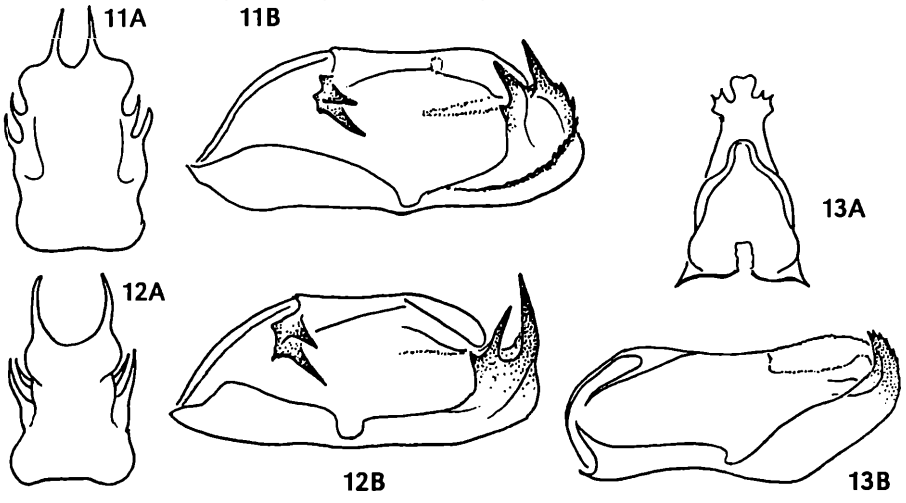
Potanthus rectifasciata (Elwes & Edwards, 1897)
Kon Cha Rang, 900 m, 12.III.1999, 1 ♂ (ALM)
Although this species was mentioned by Pinratana (1985), this is the first documented record from Vietnam; the general distribution covers the area from Sikkim to the Malay Peninsula.

Potanthus pallida (Evans, 1932)
Cat Ba, 19.V.2001, 1 ♂ (ALM).
First record from Vietnam; distributed from Ceylon, India and S. China to S. Thailand.
Potanthus juno juno (Evans, 1932)
N. Vietnam, [Kao Bang Prov.], ? loc., 12.I.1969, 1 ♀ (V. P. Solyanikov leg.); Kon Cha Rang, 850 m, 14.III.1999, 1 ♀ (ALM); Kon Ka Kinh, 7.IV.1999, 1 ♀ (ALM).
First record from Vietnam; distributed from Assam to the Malay Peninsula.

Potanthus palnia palnia (Evans, 1914)
Ba Be-Na Hang area, 13.IV., 2.V.2001, 3 ♂♂ (BXP); Ke Bang, 23.III.-7.IV.1999, 11 ♂♂ (A. L. Devyatkin, VVL).
The species was previously listed as possible for North and Central Vietnam (Devyatkin & Monastyrskii, 1999); also found in Laos (Osada et al., 1999). The distribution of the species covers the area from India and S. China to Sumatra.

Potanthus lydia lydia (Evans, 1934)
Ngoc Linh, 1600 m, 26.III.1998, 1 ♂ (ALM); 1300 m, 12.IV.1998, 1 ♂, 1 ♀ (Ha Van Hoach); 1100 m, 23.IV.1998, 1 ♀ (Ha Van Hoach).
The species, distributed from W. China to the Malay Peninsula, was previously listed as possible for Vietnam (Devyatkin & Monastyrskii, 1999), as based on a vague indication in Pinratana (1985) and its occurrence in Thailand and Laos.

Parnara batta Evans, 1949 (col. pl. Va, figs. 9, 10)
Cuc Phuong, 14.IV.1998, 1 ♂ (VVL); Hoang Lien, 2.VII.1998, 1 ♂, 1 ♀ (BXP); 1500 m, 24., 26.IV. 1998, 2 ♂♂ (VVL).
First record from Vietnam. The species rank was for the first time attributed to this taxon, described as a subspecies of *P. guttatus* (Bremer & Grey, 1853) from S.E. China (Guang Dong) and known so far only from the type locality, by Fujioka et al. (1997), on the base of its sympatry with *P. guttata* (no locality indicated). However, this species has proved to be best



Figs. 11, 12: *Pithauria* Moore, male genitalia (A – tegumen and uncus, dorsal view; B – right clasp, inner view). Fig. 11 – *P. stramineipennis* Wood-Mason & de Niceville, [1887] (Pu Mat); fig. 12 – *P. linus* Evans, 1937 (Pu Mat).
Fig. 13: *Parnara batta* Evans, 1949, male genitalia (A – tegumen and uncus, dorsal view; B – right clasp, inner view).

distinguishable among all *Parnara* species in the S.E. Asia mainland by the dorsal structure of the tegumen (fig. 13), resembling that of the Philippine *P. kawazoei* Chiba & Eliot, 1991.

Polytremis eltola eltola (Hewitson, [1869])
Ngoc Linh, 19.III.–2.IV.1998, 13 ♂♂ (ALM); Kon Plong, 24., 29., 30.XII.2000, 7 ♂♂, 3 ♀♀; 1., 2., 3.I.2001, 3 ♂♂; 12.I.2001, 1 ♂ (BXP, ALM).
First record from C. Vietnam and the southernmost record in the distribution of the nominate subspecies; ssp. *corbeti* Evans, 1937 is found in the Malay Peninsula.

Baoris pagana (de Niceville, 1887)
Hoang Lien, 3.XI.1997, 1 ♂ (FR); Kon Plong, 29.XII.2000, 1 ♂; 7.I.2001, 1 ♂, 1 ♀ (BXP).
First record from Vietnam; distributed from Nepal and N.E. India to Borneo (not found in the Malay Peninsula).

Baoris penicillata Moore, [1881]
Huu Lien, 17.VIII.2000, 1 ♂ (FR); Ba Be, 26.IV.2001, 1 ♂ (BXP); Ke Bang, 20.IV.1999, 1 ♂ (A. L. Devyatkin); Ba Be – Na Hang area (Khau Cum Valley), 26.IV.2001, 1 ♂ (BXP).
First record from C. Vietnam. The specimens (including that from Ba Be) are similar to ssp. *chapmani* Evans, 1937, although ssp. *unicolor* Moore, [1884] was already reported from N. Vietnam (Devyatkin & Monastyrskii, 1999). In fact, the relations between these two formal

subspecies remain unclear, since both of them have been repeatedly listed for the area of N.E. India, Thailand and Laos (Evans, 1949; Pinratana, 1985; Osada et al., 1999).

Caltoris aurociliata (Elwes & Edwards, 1897)
Hoang Lien NR, 2150 m, 1.X.1998, 2 ♂♂, 1 ♀ (ALM); Vu Quang, 1500 m, 6.IV.2000, 2 ♂♂ (ALM).
First record from Vietnam. Vu Quang is the southernmost locality in the distribution of the species, otherwise reported only from N.E. India (Sikkim and Assam).

Caltoris bromus bromus Leech, 1893
Cuc Phuong, 26.V.1998, 1 ♂ (FFI); Cat Ba, 3.VI.2001, 1 ♂, 2 ♀♀ (ALM); Yok Don, VI.1998, 1 ♂ (Do Ngoc Anh).
These records confirm the presumed occurrence of the species in Vietnam (Devyatkin & Monastyrskii, 1999).

Caltoris tenuis Evans, 1932
Kon Ka Kinh, 1100 m, 24.III.1999, 1 ♂, 31.III.1999, 2 ♂♂; 1200 m, 26.III.1999, 2 ♂♂ (all ALM).
First record from Vietnam; otherwise known only from Thailand, Burma and N. Laos (Osada et al., 1999).

Caltoris plebeia (de Niceville, 1887)
Ba Be, 6.VI.1997, 1 ♀ (ALM); Kon Ka Kinh, 1100 m, 31.III.1999, 1 ♀ (ALM).
First record from Vietnam; distributed from Sikkim to Borneo.

Discussion

In the previous paper on North and Central Vietnam (Devyatkin & Monastyrskii, 1999), we listed 170 species of Hesperiidae, leaving a number of further species as "possible", and estimated the total potential number of species in the area as being not less than 250. However, the above new records and newly described species (not regarded in this paper) show well that the exploration of the area is far not completed, and the previous estimations should be revised.
The present records, together with the new descriptions (Devyatkin, 2000a, 2000c, 2001 and in press) (a total of 13 species), raise the number of Hesperiidae species known from North and Central Vietnam to 222.
The territory of Laos, which is entirely adjacent to the northern and central parts of Vietnam and from which 210 species of Hesperiidae were recorded by Osada et al. (1999), provides further 49 species which may be regarded, with high probability, as future discoveries in Vietnam (some of them being already listed as "possible").
As noted earlier (Devyatkin & Monastyrskii, 1999), the Hesperiidae fauna of North and, partly, Central Vietnam is in many respects similar to that of the more northern area of North East India and South China ("Sino-Himalayan fauna"). Taking into account a number of very distant and rather unexpected records of northern species (like several *Capila* species, *Celaenorrhinus oscula, Pithauria linus* etc.), we can assume that at least 50 more species may, theoretically, penetrate Vietnam from the north, according to the distributional data of Evans (1949).

Thus, summarizing all these considerations and keeping in mind possible discoveries of new species, we can estimate the potential Hesperiidae fauna of North and Central Vietnam as being composed of not less than 300 species. Most of the possible new records in the area in study should be expected from the extreme north and from the mountain plateaus of Central Vietnam, as it was stated earlier (DEVYATKIN & MONASTYRSKII, 1999).

Zoogeographically, there seem to be two main sources forming the present fauna of the Hesperiidae in that area (apart from the species widely distributed throughout the Oriental region): first, the fauna of the rather high-mountain area from Nepal to Yunnan and N. Burma, conducted to the south by meridionally-oriented mountain ranges and valleys lying to the south-east from Thibet; second, the fauna of the relatively low-mountain coastal area of S.E. China, roughly, from Taiwan to Hainan. The Annamite mountains seem to provide a corridor for the southward distribution of both faunistic elements.

The long central part of Vietnam represents, in fact, a diffuse transitional zone between the northern and southern subspecies for those species which are distributed throughout the country. At the same time, the limestone coastal area of Central Vietnam, although relatively narrow, gives home to a number of species which remain so far endemic for this area (such as *Celaenorrhinus incestus* DEVYATKIN, 2000, *C. kuznetsovi* DEVYATKIN, 2000, *Tagiades hybridus* DEVYATKIN, 2001, etc.) This means that such a kind of landscape may prove to be unique in Indo-China (or possibly common with some adjacent parts of Central Laos), and the Annamite mountains, while providing a path for northern elements, may represent a barrier for the distribution of these lowland species.

Acknowledgements

The authors are greatly indebted to the FRONTIER and FFI organizations for placing the collected material at their disposal; to the authorities of the mentioned National Parks and Nature Reserves, for permission of field collecting in the territories under their management; special thanks are due to Messrs. P. R. ACKERY and W. J. REYNOLDS (The Natural History Museum, London) (BMNH), for giving the opportunity to study the museum collections and for the arrangement of loan of the comparative material.

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Explanation of colour plate Va (p. 233):

Fig. 1: *Capila lineata irregularis* subspec. nov., holotype ♂, Central Vietnam, Pu Hoat Nature Reserve, 17.V.1999, FRONTIER leg., upperside.
Fig. 2: Id., underside.
Fig. 3: *Seseria dohertyi salex* Evans, 1949, ♂, Central Vietnam, Bach Ma National Park, 13.VII. 1996, A. L. Monastyrskii leg., upperside.
Fig. 4: Id., underside.

Fig. 5: *Abraximorpha davidii elfina* Evans, 1949, ♂, Central Vietnam, Quang Binh Province, Minh Hoa district, vic. of Yen Hop village, 5.IV.1999, A. L. Devyatkin leg., upperside.
Fig. 6: *Abraximorpha esta* Evans, 1949, ♂, Type, Tonkin, Ngai-Tio, 4800 ft., 31.V.1924, H. Stevens leg., upperside.
Fig. 7: *Pithauria linus* Evans, 1949, ♂, North Vietnam, Ben En National Park, 27.VII.1997, FRONTIER leg., underside.
Fig. 8: *Pithauria stramineipennis* Wood-Mason & de Niceville, ♂, North Vietnam, Cuc Phuong National Park, 14.VI.1997, A. L. Monastyrskii leg., underside.
Fig. 9: *Parnara batta* Evans, 1949, ♂, North Vietnam, Lao Cai Province, Hoang Lien Nature Reserve, 24.VIII.1998, Vu Van Lien leg., upperside.
Fig.10: Id., underside.

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Colour plate Va

DEVYATKIN, A. L. & A. L. MONASTYRSKII: Hesperiidae of Vietnam 12. A further contribution to the Hesperiidae fauna of North and Central Vietnam (Lepidoptera, Hesperiidae). Atalanta **33** (1/2): 137-155.

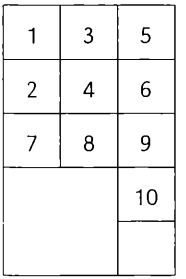
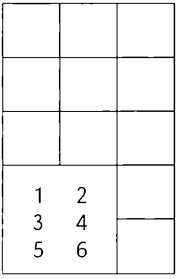


Fig. 1: *Capila lineata irregularis* subspec. nov., holotype ♂, Central Vietnam, Pu Hoat Nature Reserve, 17 V.1999, FRONTIER leg., upperside.
Fig. 2: Id., underside.
Fig. 3: *Seseria dohertyi salex* EVANS, 1949, ♂, Central Vietnam, Bach Ma National Park, 13.VII. 1996, A. L. MONASTYRSKII leg., upperside.
Fig. 4: Id., underside.
Fig. 5: *Abraximorpha davidii elfina* EVANS, 1949, ♂, Central Vietnam, Quang Binh Province, Minh Hoa district, vic. of Yen Hop village, 5.IV.1999, A. L. DEVYATKIN leg., upperside.
Fig. 6: *Abraximorpha esta* EVANS, 1949, ♂, Type, Tonkin, Ngai-Tio, 4800 ft., 31.V.1924, H. STEVENS leg., upperside.
Fig. 7: *Pithauria linus* EVANS, 1949, ♂, North Vietnam, Ben En National Park, 27 VII.1997, FRONTIER leg., underside.
Fig. 8: *Pithauria stramineipennis* WOOD-MASON & DE NICEVILLE, ♂, North Vietnam, Cuc Phuong National Park, 14.VI.1997, A. L. MONASTYRSKII leg., underside.
Fig. 9: *Parnara batta* EVANS, 1949, ♂, North Vietnam, Lao Cai Province, Hoang Lien Nature Reserve, 24.VIII.1998, VU VAN LIEN leg., upperside.
Fig.10: Id., underside.

Colour plate Vb

SALDAITIS, A. & P IVINSKIS: Some notes about species of the genus *Palearctia* FERGUSSON, 1984 (Lepidoptera, Arctiidae). - Atalanta **33** (1/2): 157-172.

Fig. 1: *Palearctia glaphyra* ab. *flava*? O. BANG-HAAS
U.S.S.R., 3400-3600 m, Kirghizia, env. Baranon Pass, 11.-18.VII.1991, leg. M. KOOP, coll. WITT.
Fig. 2: *Palearctia glaphyra aksuensis* O. BANG-HAAS
Asia ctr., Kirghizia, Ala Tau, Terskey, Tal des Fluss Molo, 3500 m, 19.VII.1984, coll. L. BIEBER, coll. WITT.
Fig. 3: *Palearctia ferghana* STAUDINGER
Asia centralis, USSR, Uzbekistan, Alajskij chrebet, 4200 m, 12.VII.1986, K. L. KRUSEK leg., coll. WITT.
Fig. 4: *Palearctia ferghana* STAUDINGER
UdSSR, Usbekische SSR, Alaiski Chrebjet, Chamsaabad, 3000 m, 2.VII. 1986, leg. PETER SALK, Berlin, coll. WITT.
Fig. 5: *Palearctia erschoffi* ALPHERAKI
Ala Tau, G. RÜCKBEIL, coll. F DANIEL, coll. WITT.
Fig. 6: *Palearctia erschoffi* ALPHERAKI
Ala Tau, G. RÜCKBEIL, coll. F. DANIEL, coll. WITT.



Colour plate Va/Vb